Guidelines for

Biodiversity-Rich Landscapes

under the Western Crown Lands Conceptual Plan (July 2015)

1. What is a Biodiversity-Rich Landscape?

A Biodiversity-Rich Landscape (BRL), is a planning unit under the Western Crown Lands Conceptual Plan http://novascotia.ca/natr/land/western-land/ .

A biodiversity-rich landscape is characterized by a breadth of species and ecosystems, including but not limited to species-at-risk. The dominant value is conservation. Although resource development can be undertaken in these areas, protection of biodiversity and habitats will guide management and resource extraction.

The intent of this and the other planning units in the conceptual plan is to define large-scale area(s) according to their dominant value (eg,. Biodiversity-rich, Resource Management, and Multiple Values). It is essential to recognize that these values are not mutually exclusive; individual areas may contain more than one planning unit. All require consideration in planning.

These guidelines will provide information and management direction for the BRLs until formal landscape level plans for conservation and resource use are in place. These guidelines will be reviewed annually. The Department of Natural Resources' (DNR) long-term objective is to use BRZ units and associated values to inform and be integrated into comprehensive multi-scale, cumulative effects landscape level plans for the province.

2. How is biodiversity protected in BRLs?

Biodiversity is conserved and managed on all Crown land. Biodiversity conservation will also be encouraged on private land. While these interim guidelines will be applied on all Crown lands within BRLs, DNR will encourage the use of the guidelines on private land within BRLs.

2.1. What is already in place to protect biodiversity? On all Crown land there are many requirements and activities already in place to support the protection of biodiversity within BRLs. These include the: Endangered Species Act, Wildlife and Watercourse Protection Regulations, Old Forest Policy, Wilderness Area Protection Act, Special Places Protection Act, Special Management Practices (Wood Turtle, Boreal Felt Lichen, Mainland Moose etc.), Species at Risk Recovery Plans, Code of Forest Practices, Nova Scotia Wetland Conservation Policy. All policies and practices are subject to periodic assessment and revision to ensure that they adequately protect biodiversity values, as circumstances and our understanding of those values evolve. *

2.2. What new measures to protect biodiversity will apply to BRLs? The following new actions will be employed for all BRLs:

- Apply Interim Operational Forest Harvest Guidelines for BRLs (see 4. below);
  - Favour restoration of natural conditions;
  - Conserve special biodiversity features;
  - Reduce road impacts;
  - Conserve old growth forests;
  - Foster connectivity of mature forest; and
  - Conserve wetland habitats.
- Consider values listed by a panel of experts in Table 1 (as well as other known important biodiversity values) into management decisions;
- Increase education, awareness and compliance within BRLs;

* These guidelines replace Interim *Guidelines for Environmentally Sensitive Areas under the Western Crown Lands Conceptual Plan (February 2015)*. The current guidelines are based on revisions to the interim guidelines following external input. The name and the definition of *Environmentally Sensitive Area* has been revised to better clarify the meaning and intent of the term. In keeping with our adaptive management approach, these guidelines will be updated periodically based on improved information and the results of monitoring as part of the forest landscape planning process.

- Encourage and coordinate research within BRLs; and
- Support completion of Parks and Protected Areas Plan for these areas (including 53,613 ha protected, or planned for protection, Table 2).

3. Unit specific values and management.

There are six BRLs identified in the plan (Figure 1). The landscape level values for each of these units identified by a team of experts are summarized in Table 1. These values will inform the implementation of the new interim actions (above 2.2) and the Integrated Resource Management (IRM) review, which will include participation of the full IRM team and the Wildlife Division.

4. Operational Forest Harvest Guidance for BRLs.

The following actions, listed in 2.2 above, will be implemented on Crown lands within BRLs. They will also be encouraged on private land within BRLs. *The Code of Forest Practices* https://www.novascotia.ca/natr/forestry/reports/Code-of-Forest-Practice-2008.pdf will be used to define terms and principles supporting these guidelines, but does not provide the detail to make these guidelines fully operational.*

Favour restoration of natural conditions

- The Forest Ecosystem Classification will be used to determine natural ecosystem conditions in order to prescribe appropriate harvesting and silviculture practices;
- The Forest Management Guides will be used to determine the range of practices, which may include clearcut, selection, commercial thinning, shelterwood, seed tree, crop tree release, pre-commercial thinning, and reforestation;
- When extensive management is prescribed, the management will include provisions for natural stand structure; including large snags (standing deadwood), coarse woody debris, species diversity, and age structure;
- Progress within BRL units will be monitored using the Ecological Emphasis Index; and
- The Forest Ecosystem Classification, Pre-treatment assessment and Ecological Landscape Analysis will provide guidance. All will be reviewed to ensure that biodiversity values are adequately and explicitly reflected.

Conserve priority biodiversity features

- The Biodiversity Stewardship Guidebook (currently under development) and the Atlantic Conservation Centre Database will be used to identify and conserve priority biodiversity features during forest operations.

Reduce road impacts

- A consistent landscape level approach will be used to develop strategic road plans, including target road densities, for Crown land that focus on reducing the ecological impact of road systems on the BRL's;
- Progress will be monitored using the Road Index tool from the Ecological Landscape Analysis; and
- In areas open to the public, DNR will work with local ATV groups, anglers and hunters, and other outdoor recreation groups to identify key connect routes.

Conserve old growth forests

- Old growth forest will be conserved following the procedures in the NS DNR Old Forest Policy 2012;
- To help conserve old growth forest not currently under the policy, all stands identified during pre-treatment assessments that are older than 100 years will be further evaluated using the NS DNR Old Forest Scoresheet; and
- The Scoresheet results will be used to evaluate old forest conditions and provide key information for IRM teams and the Provincial Old Forest Coordinator to develop management or conservation strategy for these stands with guidance from the Old Forest Policy.

Foster connectivity of mature forest

- Landscape level planning will seek in the long term to restore or maintain mature forest to the levels identified in the Ecological Landscape Analyses; and
- Connectivity of mature forest will be assessed within the BRL's using landscape metrics (eg,. Nearest Neighbour Analysis).

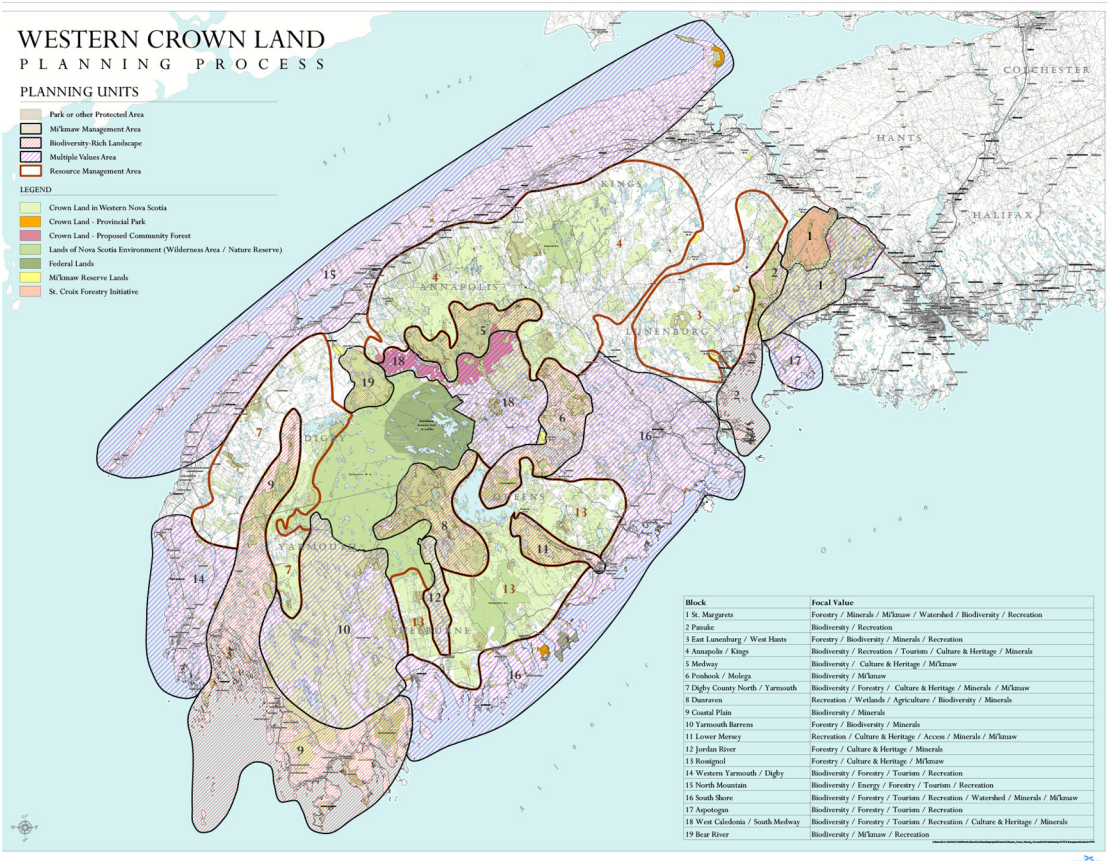
Conserve wetland habitats

- There will be no forest harvesting within the required Special Management Zones under the Wildlife Habitat and Water Course Protection Regulations in all wetlands with standing or flowing water;
- Priority Atlantic Coastal Plain Flora species as identified in the Recovery Strategy will be conserved under a Special Management Practice.

Develop educational tools:

- Educational tools will be developed to inform forestry workers and the public about the significance of sustainable forestry, biodiversity values and BRLs in the region.

Figure 1. Map showing the Biodiversity-Rich Landscapes, provincial Crown land and protected areas.



Block	Focal Value
1 St. Margarets	Forestry / Minerals / Mi'kmaw / Watershed / Biodiversity / Recreation
2 Panuke	Biodiversity / Recreation
3 East Lunenburg / West Hants	Forestry / Biodiversity / Minerals / Recreation
4 Annapolis / Kings	Biodiversity / Recreation / Tourism / Culture & Heritage / Minerals
5 Medway	Biodiversity / Culture & Heritage / Mi'kmaw
6 Ponhook / Molega	Biodiversity / Mi'kmaw
7 Digby County North / Yarmouth	Biodiversity / Forestry / Culture & Heritage / Minerals / Mi'kmaw
8 Dunraven	Recreation / Wetlands / Agriculture / Biodiversity / Minerals
9 Coastal Plain	Biodiversity / Minerals
10 Yarmouth Barrens	Forestry / Biodiversity / Minerals
11 Lower Mersey	Recreation / Culture & Heritage / Access / Minerals / Mi'kmaw
12 Jordan River	Forestry / Culture & Heritage / Minerals
13 Rossignol	Forestry / Culture & Heritage / Mi'kmaw
14 Western Yarmouth / Digby	Biodiversity / Forestry / Tourism / Recreation
15 North Mountain	Biodiversity / Energy / Forestry / Tourism / Recreation
16 South Shore	Biodiversity / Forestry / Tourism / Recreation / Watershed / Minerals / Mi'kmaw
17 Aspotogan	Biodiversity / Forestry / Tourism / Recreation
18 West Caledonia / South Medway	Biodiversity / Forestry / Tourism / Recreation / Culture & Heritage / Minerals
19 Bear River	Biodiversity / Mi'kmaw / Recreation

Table 1. The six Biodiversity-Rich Landscapes (named and numbered as per Western Crown Lands Conceptual Plan and some of their identified biodiversity and social values.

Biodiversity-Rich Landscape	Some key important biodiversity and social values
Panuke Lake (2)	• Rare old growth lichens including several species found only in old growth coniferous forests. • Important region of connectivity. • Contributes significantly to one of the endangered mainland moose concentration areas.
Medway (5)	• High concentration of old-growth forest including a variety of mixed Acadian forest types. • A representative complex of the full variety of ecosystem types which make up the Fisher Lake Drumlins natural landscape (Ecodistrict 720 – South Mountain). • Very important brook trout habitat. • A highly prized system of recreational wilderness canoeing waterways.
Ponhook/Molega (6)	• Nationally important strongholds for Blanding's Turtle, Eastern Ribbonsnake, Golden-crest, Long's Bulrush, Redroot, and numerous other rarities. • Shingle Lake and surrounding lakes support provincially rare geological features and globally rare rock heathland ecosystems. • LaHave Drumlins natural landscape is not well represented by protected areas (Ecodistrict 740 – LaHave Drumlins). • Rare herpetofauna here are somewhat genetically isolated from other subpopulations.
Dunraven (8)	• Large undisturbed core habitat for edge and disturbance sensitive species. • Includes habitat for many at risk species including nationally and provincially endangered Blanding's turtle, nationally and provincially threatened Golden crest and many other species. • Contains a wetland of international significance and Ramsar candidate—Dunraven Bog—current host of nationally threatened Atlantic coastal plain flora plants such as Golden crest. • Contributes significantly to one of the endangered mainland moose concentration areas.
Coastal Plain (9)	• A unique area supporting rare and endangered species found nowhere else in Canada, but also unique in providing often better habitat protection opportunities for these species than where they also exist on the United States eastern seaboard, where human population. density and development are much higher. • The coastal headlands and islands in this area together provide a regionally and possibly nationally significant staging area for fall migratory birds. The salt marshes in the Chebogue and Tusket River and island chains are relatively pristine and harbour assemblages of plants not found in othersalt marshes in Nova Scotia or Canada.
Lower Mersey (11)	• A concentration of remnant old-growth hemlock-red spruce areas. • An area of high significance for the Mi'kmaq, where many artifacts have been found.

Table 2. The area, amount of Crown land and protected area in each of the Biodiversity-Rich Landscapes.

BRL	BRL area	Crown (ha)	Crown per cent of BRL (%)	Current PA (ha)*	Current PA (%)*	New planned PA (ha)**	New planned PA (%)**	Total PA (ha)	Total PA (%)
Panuke	(19,164)	9,439	49.3	280	1.5	5,965	31.1	6,245	32.6
Medway	31,731	27,906	87.9	265	0.8	16,935	53.4	17,200	54.2
Ponhook/ Molega	44,723	14,073	31.5	4,310	9.6	4,532	10.1	8,842	19.8
Lower Mersey	16,449	11,318	68.8	0	0.0	1,536	9.3	1,536	9.3
Dunraven	47,327	40,030	84.6	10,768	22.8	14,372	30.4	25,140	53.1
Coastal Plain	138,784	36,458	26.3	5,003	3.6	10,254	7.4	15,257	11.0
Total	298,178	139,225	46.7	20,626	6.9	53,596	18.0	74,222	24.9

* Protected Areas includes Provincial Parks, National Parks, National Wildlife Areas, Wilderness Areas and Nature Reserves

** Planned Protected Areas including all new pending protected areas in the Our Parks and Protected Areas: A Plan for Nova Scotia (2013)